



How to make a Weather Station - Rain Gauge

What is a rain gauge?

A rain gauge collects rain water, and measures how much falls in a particular place.

Introduction:

Happy Earth Day! This year's theme is Climate Action, which means looking at changes we can all make to help our planet. We want you to take action by joining a worldwide network of scientists! You don't need a lab: you can do this from home, right now, by building a weather station with things you may have around the house.



You will need:

- 2 litre empty plastic bottle.
- Ruler.
- Plaster of Paris (if you don't have any plaster why not try clay, plasticine, or even jelly!).
- Paper clips.
- Scissors.
- Tape.

What to do:

STEP 1

Remove the bottle cap and cut about the top quarter off your plastic bottle, you want to cut where the sides of the bottle are straight (you might want to draw on where to cut so that it is nice and neat.)



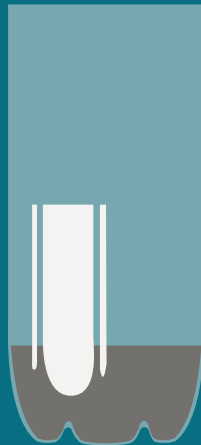
SAFETY NOTICE:

You may need an adult to help you make a hole in the bottle with some sharp scissors.



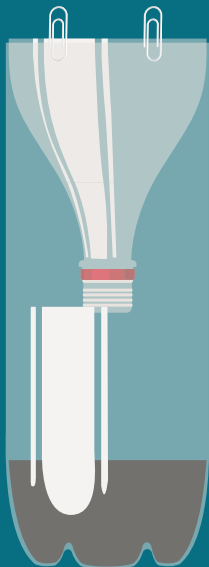
STEP 2

If your bottle has a bumpy bottom, you will need to fill it in, so that you have a flat surface. We used plaster of Paris (this worked well as it made the bottle heavy so it couldn't fall over). If you don't have plaster, why not try pushing clay or plasticine into the bottom, or you could even make up a jelly, and let it set in your bottle.



SAFETY NOTICE:

If you are using plaster, make sure not to touch it while it is setting as it can get hot. If you are using jelly, make sure you have adult supervision when using boiling water.



STEP 3

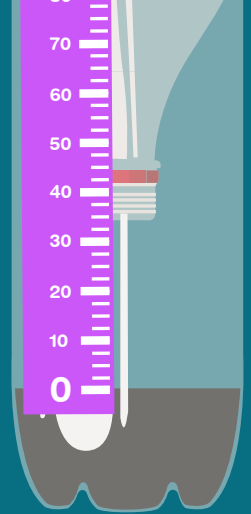
Place the top of the bottle upside down in the bottom, so that it makes a funnel. It should fit snugly.

STEP 4

Clip a few paper clips (if you don't have paper clips, pegs or hair clips would also work) around the edge so that the top of the bottle cannot move.

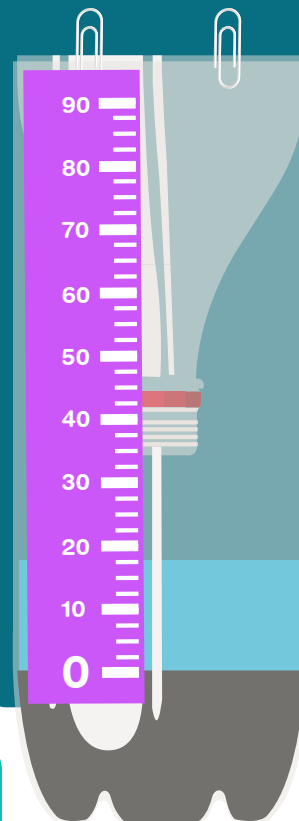
STEP 5

Attach a ruler to the side of your bottle with tape. Make sure that the zero line of your ruler is lined up with the top of your flat surface, and not the bottom of the bottle.



STEP 6

Place your completed rain gauge outside in your garden or yard. Make sure it is not too close to any buildings/ walls or trees/ bushes. If you think it might fall over in the wind, you could dig a small hole in some soil to balance it in.



STEP 7

Check on your rain gauge every day and see how much water it has collected! Once you have collected data you can upload it to the Met Office WOW website www.metoffice.gov.uk Remember to record your results in mm.



Watch our Earth Day video to see what to do with your results! life.org.uk/life-goes-online

Can you use the Met Office website to see how much rain fell where you live on the same day in previous years?

We are stuck at home, but **#LifeGoesONline!** Check out other activities to try at home on our social media channels [@scienceatlife](https://twitter.com/scienceatlife) and send us a message if there's anything you want to see us cover!

